

WHAT IS CLAIMED IS:

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1. An occupant protection apparatus for a vehicle, comprising:

driver-seat seatbelt tension changing means for changing a tension applied to a driver-seat seatbelt provided to a driver seat of the vehicle;

passenger-seat seatbelt tension changing means for changing a tension applied to a passenger-seat seatbelt provided to a seat other than said driver seat;

crash predicting means for predicting a crash of said vehicle; and

belt tension controlling means for controlling said driver-seat seatbelt tension changing means and said passenger-seat seatbelt tension changing means so as to increase the tension applied to each of said driver-seat seatbelt and said passenger-seat seatbelt when said crash predicting means determines that there is a possibility of a vehicle crash, and set the tension applied to said driver-seat seatbelt to be smaller than the tension applied to said passenger-seat seatbelt.

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2. An occupant protection apparatus for a vehicle, comprising:

occupant belt tension changing means for changing a tension applied to an occupant seatbelt provided to the vehicle;

outside-temperature detecting means for detecting a temperature outside said vehicle;

crash predicting means for predicting a crash of said vehicle; and

5           belt tension controlling means for controlling said occupant belt tension changing means so as to increase the tension applied to the occupant seatbelt when said crash predicting means determines that there is a possibility of a vehicle crash, and set the tension  
10           applied to the occupant seatbelt, when the outside temperature detected by said outside-temperature detection means is a first temperature, to be larger than the tension applied to the occupant seatbelt when the detected outside temperature is a second temperature higher than  
15           the first temperature.

20           3. The occupant protection apparatus as claimed in claim 2, further comprising physique detecting means for detecting physique of an occupant, and wherein said belt tension controlling means further controls said occupant belt tension changing means based on the physique  
25           detected by said physique detecting means so that the tension applied to said occupant seatbelt is set to be smaller as the detected physique is larger.

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4. An occupant protection apparatus for a vehicle, comprising:

occupant belt tension changing means for changing a tension applied to an occupant seatbelt provided to the vehicle;

inside-temperature detecting means for detecting  
5 a temperature inside said vehicle;

crash predicting means for predicting a crash of said vehicle; and

belt tension controlling means for controlling said occupant belt tension changing means so as to  
10 increase the tension applied to the occupant seatbelt when said crash predicting means determines that there is a possibility of a vehicle crash, and set the tension applied to the occupant seatbelt, when the inside temperature detected by said inside-temperature detection  
15 means is a first temperature, to be larger than the tension applied to the occupant seatbelt when the detected inside temperature is a second temperature higher than the first temperature.

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5. The occupant protection apparatus as claimed in claim 3, further comprising physique detecting means  
25 for detecting physique of an occupant, and wherein said belt tension controlling means further controls said occupant belt tension changing means based on the physique detected by said physique detecting means so that the tension applied to said occupant seatbelt is set to be  
30 smaller as the detected physique is larger.

6. An occupant protection apparatus for a vehicle, comprising:

occupant belt tension changing means for changing a tension applied to an occupant seatbelt  
5 provided to the vehicle;

belt wear detecting means for detecting wear of said occupant seatbelt;

crash predicting means for predicting a crash of said vehicle; and

10 belt tension controlling means for controlling said occupant belt tension changing means, when it is judged by said crash predicting means that there is a possibility of a vehicle crash and also when wear of said occupant seatbelt is detected by said belt wear detecting  
15 means, so as to increase the tension applied to the occupant seatbelt.

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7. An occupant protection apparatus for a vehicle, comprising:

occupant belt tension changing means for changing a tension applied to an occupant seatbelt  
25 provided to the vehicle;

belt wear detecting means for detecting wear of said occupant seatbelt;

child seat detecting means for detecting attachment of a child seat to a passenger seat of said  
30 vehicle;

crash predicting means for predicting a crash of said vehicle; and

belt tension controlling means for controlling

said occupant belt tension changing means, when it is  
judged by said crash predicting means that there is a  
possibility of a vehicle crash and when wear of said  
occupant seatbelt is detected by said belt wear detecting  
5 means and also when attachment of said child seat is not  
detected by child seat detecting means, so as to increase  
the tension applied to the occupant seatbelt.

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